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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/211,879	12/14/98	SUDDUTH	B NOXTECH-01B

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EXAMINER

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ART UNIT

PAPER NUMBER

1754

DATE MAILED:

06/22/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/211,879

Applicant(s)
SUDDUTH et al.

Examiner
Timothy VANOV

Group Art Unit
1754



☒ Responsive to communication(s) filed on Jun 11, 1999

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 61-101 and 106-110 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 61-101 and 106-110 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☒ The drawing(s) filed on Dec 14, 1998 is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 7 and 10

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

DETAILED ACTION

Drawings

nl Figures 1a, 1b and 1c should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 61-101 and 106-110 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- nl* a) The preamble of claim 61 does not particularly point out what the method is for.
- nl* b) Claim 62 does not particularly point out what the NO_x is stoichiometrically compared to. The insertion of --with respect to the reductants-- between “stoichiometrically” and “by” would resolve this issue.
- nl* c) In claim 63, the phrase “as much as” is vague and indefinite. The substitution of --at least- - in lieu of “as much as” would resolve this issue.
- nl* d) Claim 68 does not particularly point out what happens during the heating or what the final temperature is. The substitution of --autothermal heating and autocatalytic NO_x reduction are completed-- in lieu of “exhaust gas is heated” and the deletion of “to a final temperature” would

resolve these issues.

o/e) In claim 73, “, either as liquids or vapors” are not species of the Markush group.

Cancellation of this phrase would resolve this issue.

o/f) In claim 79, the phrase “verify a level of CO depletion corresponding to the final temperature(s) for controlling” is somewhat confusing. The substitution of --control-- in lieu of this phrase would resolve this issue.

o/g) In claim 80 line 4, --,-- should be substituted in lieu of “or” to improve the clarity of the Markush group.

o/h) Claim 87 does not particularly point out if it is the reductants or the hydrocarbons that are the “mixtures, solutions, emulsions, . . .” etc. . . The insertion of --, wherein the reductants are injected-- between “hydrocarbon(s)” and “as” in line 2 of claim 87 would resolve this issue.

o/i) In claim 88, the “consisting of” language materially excludes the dissolved nitrogen. The substitution of --containing-- in lieu of “consisting of” in line 2 and the substitution of --wherein the aqueous solution contains-- in lieu of “in water containing” in lines 2 and 3 would resolve this issue.

o/j) In claim 92, --the-- should be inserted between “using” and “temperature” to improve the clarity of the claim language.

o/k) In claim 98 line 2, --to-- should be substituted in lieu of “in” to improve the clarity of the claim language.

o/l) Claim 109 is not seen to further limit the subject matter of the claimed invention since it is expected that the autothermal and autocatalytic conditions of claim 61 would lower the NO_x level

in the gas. Cancellation of claim 109 is suggested.

- m) Claim 61 does not particularly point out and distinctly recite a step for removing the nitrogen oxides out of the exhaust gas.

Double Patenting

a) Claim 61 of this application conflicts with claim 59 of Application No. 08-742,769. 37 CAR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

b) A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claim 61 is provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 59 of copending Application No. 08-742,769. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

Claim Rejections - 35 USC § 103

The claims have not been rejected under either 35 U.S.C. 102 or 35 U.S.C. 103 because none of the references of record teach or suggest the claimed method for removing nitrogen oxides out of an exhaust gas wherein hydrocarbons autoignite and release heat autothermally and the autothermal heating results in autocatalytic conditions effective for reducing the nitrogen oxides, as set forth in at least the applicants' independent claim 61.


The following references are made of record:

U. S. Patent 5,899,269 disclosing a flameless combustor comprising a catalytic surface which is effective to reduce the autoignition temperature of the fuel and oxidant from a non-catalyzed autoignition temperature to a catalyzed autoignition temperature (please see claim 1), and

U. S. Patent 3,873,671 disclosing a process for removing nitrogen oxides out of a gas.

Any inquiry concerning this communication should be directed to Timothy Vanoy at telephone number (703) 308-2540.

Timothy Vanoy/tv


Timothy Vanoy

17 June 1999

Patent Examiner

Art Unit 1754